

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization  
International Bureau



(43) International Publication Date  
11 December 2003 (11.12.2003)

PCT

(10) International Publication Number  
WO 03/103077 A2

(51) International Patent Classification<sup>7</sup>: H01M 4/46

John, Malcolm [GB/GB]; Lyduska, Routs Green, Bledlow Ridge, High Wycombe, Bucks HP14 4BB (GB).  
HOGARTH, Martin, Philip [GB/GB]; 45 Churchill Crescent, Sonning Common, Reading RG4 9RU (GB).

(21) International Application Number: PCT/GB03/01959

(22) International Filing Date: 6 May 2003 (06.05.2003)

(74) Agent: WISHART, Ian, Carmichael; Johnson Matthey Technology Centre, Blounts Court, Sonning Common, Reading RG4 9NH (GB).

(25) Filing Language: English

(26) Publication Language: English

(81) Designated States (national): CA, JP, US.

(30) Priority Data:  
0212636.5 31 May 2002 (31.05.2002) GB

(84) Designated States (regional): European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR).

(71) Applicant (for all designated States except US): JOHN-SON MATTHEY PUBLIC LIMITED COMPANY [GB/GB]; 2-4 Cockspur Street, Trafalgar Square, London SW1Y 5BQ (GB).

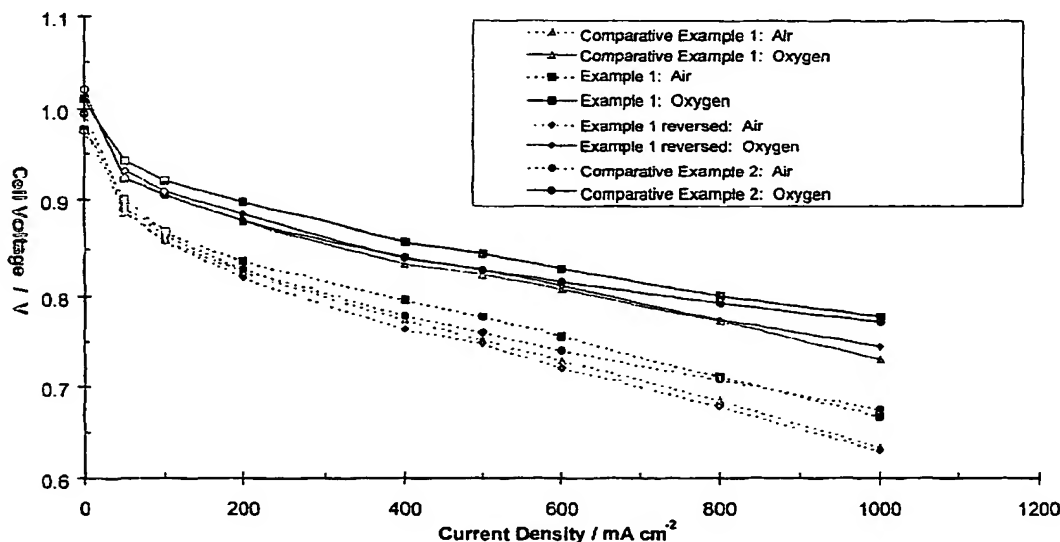
Published:  
— without international search report and to be republished upon receipt of that report

(72) Inventors; and

(75) Inventors/Applicants (for US only): GASCOYNE,

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: MANUFACTURE OF A GAS DIFFUSION ELECTRODE



(57) Abstract: A novel process for the manufacture of a gas diffusion electrode comprising the steps of a) application of a catalyst ink to a gas diffusion substrate; b) firing; c) application of a proton-conducting polymer solution; and d) drying; characterised in that the proton-conducting polymer solution comprises one or more solvents selected from the group of solvents with structure (A) wherein R<sup>1</sup>, R<sup>2</sup> and R<sup>3</sup> are independently chosen from H, methyl, ethyl, n-propyl and isopropyl is disclosed. A novel process for the manufacture of a membrane electrode assembly is also disclosed.

WO 03/103077 A2